

JC07 Rec'd PCT/PTO 17 DEC 2000

FORM PTO-1390 (REV 10-94)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S DOCKET NUMBER
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371			01-732
INTERNATIONAL APPLICATION NO. PCT/EP00/05681		INTERNATIONAL FILING DATE 20 June 2000 (20.06.00)	U.S. APPLICATION NO. (if known, see 37 C.F.R. 1.5) 10/018609
TITLE OF INVENTION DEVICE FOR FINELY CUTTING WORKPIECES FROM A MATERIAL		PRIORITY DATE CLAIMED 25 June 1999 (25.06.99)	
APPLICANT(S) FOR DO/EO/US Ernst Rytz et al.			
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:			
<p>1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.</p> <p>2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.</p> <p>3. <input type="checkbox"/> This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).</p> <p>4. <input type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.</p> <p>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))</p> <p>a. <input checked="" type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau).</p> <p>b. <input type="checkbox"/> has been transmitted by the International Bureau.</p> <p>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</p> <p>6. <input checked="" type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(2)).</p> <p>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))</p> <p>a. <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau).</p> <p>b. <input type="checkbox"/> have been transmitted by the International Bureau.</p> <p>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</p> <p>d. <input type="checkbox"/> have not been made and will not be made.</p> <p>8. <input type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</p> <p>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</p> <p>10. <input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</p>			
Items 11. to 16. below concern document(s) or information included:			
11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.			
12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.			
13. <input checked="" type="checkbox"/> A FIRST preliminary amendment.			
<input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment.			
14. <input type="checkbox"/> A substitute specification.			
15. <input type="checkbox"/> A change of power of attorney and/or address letter.			
16. <input type="checkbox"/> Other items or information:			

Page 1 of 7

EXPRESS MAIL # EL394336809US

(January 1995)

I hereby certify that this document is being deposited with the United States Postal Service as Express Mail in an envelope addressed to: Commissioner of Patent and Trademark, Washington, D.C. 20231

12-17-01

(Date of Deposit)

Janice T. Staton

Name and Reg. No.

Signature

Date of Signature

US

Annex US.II, page 2 PCT Applicant's Guide - Volume II - National Chapter - US

U.S. APPLICATION NO. 10/018609		INTERNATIONAL APPLICATION NO. PCT/EP0005681		ATTORNEY'S DOCKET NUMBER 20 June 2000 (20.06.00)	
17. <input checked="" type="checkbox"/> The following fees are submitted:				CALCULATIONS . PTO USE ONLY	
BASIC NATIONAL FEE (37 CFR 1.492(a)(1)-(5)):					
Search Report has been prepared by the EPO or JPO.....890.....					
International preliminary examination fee paid to USPTO (37 CFR 1.482)..... \$660.00					
No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2)).. \$730.00					
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO..... \$980.00					
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4)..... \$92.00					
ENTER APPROPRIATE BASIC FEE AMOUNT =				\$890	
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input checked="" type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$130	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	8 -20 =	0	X \$22.00	\$ 0	
Independent claims	1 -3 =	0	X \$76.00	\$ 0	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$240.00	\$	
TOTAL OF ABOVE CALCULATIONS =				\$1020	
				\$	
SUBTOTAL =				\$1020	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).				+	
TOTAL NATIONAL FEE =				\$ 1020	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +				\$	
TOTAL FEES ENCLOSED =				\$1020	
				Amount to be refunded \$	
				charged \$	
a. <input checked="" type="checkbox"/> A check in the amount of \$ <u>1020</u> to cover the above fees is enclosed.					
b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.					
c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>02-0184</u> . A duplicate copy of this sheet is enclosed.					
NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.					
SEND ALL CORRESPONDENCE TO:				SIGNATURE	
GEORGE A. CORY				George A. Cory	
BACHMAN & LAPOINTE, P.C.				NAME	
900 Chapel Street, Suite 1201				34,309	
New Haven, CT 06510-2802				REGISTRATION NUMBER	

10/018609

JC13 Rec'd PCT/PTO 17 DEC 2001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: ERNST RYTZ ET AL. Docket No.: 01-732
Serial No.: Examiner :
Filed : Art Unit :
PCT No. : PCT/EP00/05681
IFD : June 20, 2000
For : DEVICE FOR FINELY CUTTING
WORKPIECES FROM A MATERIAL

900 Chapel Street
Suite 1201
New Haven, CT 06510-2802

PRELIMINARY AMENDMENT

Hon. Commissioner of Patent & Trademark
United States Patent & Trademark Office
Washington, DC 20231

Dear Sir:

In the above-identified application for United States patent,
please amend as follows:

IN THE SPECIFICATION

Attached please find a clean and marked up copies of
amendments to the specification including a new Abstract.

IN THE IN THE CLAIMS

Attached hereto are claim amendments for claims 3, 5, 6 and 8,
as well as a clean copy of these claims as amended.

R E M A R K S

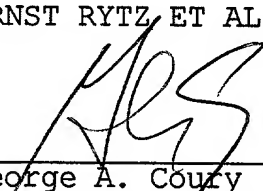
Headings and an Abstract have been added to the specification

20112015095001

and amendments have been made to the claims to remove the multiple dependencies in order to conform with U.S. practice. An early action on the merits is respectfully requested.

Respectfully submitted

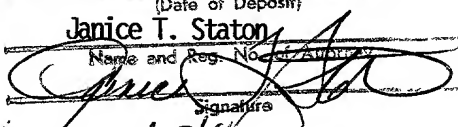
ERNST RYTZ ET AL.

By 
George A. Coury
Attorney for Applicants

Area Code - 203
Telephone - 777-6628
Telefax - 865-0297

Date: December 17, 2001
EXPRESS MAIL #EL394336809US

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231

12-17-01
(Date of Deposit)
Janice T. Staton
Name and Reg. No. of Attorney

Signature
12/17/01
Date of Signature

MARKED UP VERSION OF SPECIFICATION
(WITH AMENDMENTS SHOWN IN "BOLD")

Page 1, after the title and before the first paragraph:

insert as a heading BACKGROUND OF THE INVENTION.

Page 3, before the first paragraph:

insert as a heading SUMMARY OF THE INVENTION.

Page 5, after the second paragraph:

insert as a heading BRIEF DESCRIPTION OF THE DRAWINGS.

Paragraph 3 delete in its entirety and insert the following:

Further, advantages, features and details of the invention follow from the description below of a preferred exemplary embodiment and with reference to the drawing.

DETAILED DESCRIPTION

Referring to the Figure, a cross section is shown through an apparatus according to the invention for the fine blanking of workpieces from a material, for example from a metal sheet 1. This metal sheet is passes through a machine frame 2 between a crosshead 3 and a base 4. Side walls are identified by 5 and 6.

10018609.021102

ABSTRACT

A device for finely cutting workpieces from a material (1), comprising a press plate (10) which is subjected to the pressure of a knife-edged ring cylinder (13) consisting of a knife-edged ring and a clipping punch (9) which is guided in said pressing plate (10), and associated with a blanking die (7) with a counter holder (16) (ejector) on a tappet, whereby said tappet (7) is placed against at least one compensation cylinder (22) which is hydraulically connected to the knife-edged ring cylinder

201120 6098T001

CLEAN VERSION OF SPECIFICATION

Page 1, after the title and before the first paragraph:

insert as a heading BACKGROUND OF THE INVENTION.

Page 3, before the first paragraph:

insert as a heading SUMMARY OF THE INVENTION.

Page 5, after the second paragraph:

insert as a heading BRIEF DESCRIPTION OF THE DRAWINGS.

Paragraph 3 delete in its entirety and insert the following new paragraphs:

Further, advantages, features and details of the invention follow from the description below of a preferred exemplary embodiment and with reference to the drawing.

DETAILED DESCRIPTION

Referring to the Figure, a cross section is shown through an apparatus according to the invention for the fine blanking of workpieces from a material, for example from a metal sheet 1. This metal sheet is passes through a machine frame 2 between a crosshead 3 and a base 4. Side walls are identified by 5 and 6.

20110122 06092001

MARKED UP VERSION OF CLAIMS
(WITH AMENDMENTS SHOWN IN BOLD)

3. (Amended) The apparatus as claimed in claim 1 [or 2], characterized in that a piston (23) is arranged in the compensation cylinder[(s)] (22) and is firmly connected to the ram (7) via a piston rod (24).

5. (Amended) The apparatus as claimed in [at least one claims 1 to 4] claim 1, characterized in that the V-ring cylinder (13) is arranged on a crosshead (3) of a machine frame (2).

6. (Amended) The apparatus as claimed in [at least one of claims 1 to 5] claim 1, characterized in that the ram (7) is supported against at least one main cylinder (19.1, 19.2).

8. (Amended) The apparatus as claimed in [at least one of claims 1 to 7] claim 1, characterized in that the hydraulic connection (25) between compensation cylinder (22) and V-ring cylinder (13) also has a connection (36) to an oil tank via a logic valve (27).

20130509 09:20:20

CLEAN VERSION OF AMENDED CLAIMS

3. (Amended) The apparatus as claimed in claim 1, characterized in that a piston (23) is arranged in the compensation cylinder (22) and is firmly connected to the ram (7) via a piston rod (24).

5. (Amended) The apparatus as claimed in claim 1 characterized in that the V-ring cylinder (13) is arranged on a crosshead (3) of a machine frame (2).

6. (Amended) The apparatus as claimed in claim 1 characterized in that the ram (7) is supported against at least one main cylinder (19.1, 19.2).

8. (Amended) The apparatus as claimed in claim 1, characterized in that the hydraulic connection (25) between compensation cylinder (22) and V-ring cylinder (13) also has a connection (36) to an oil tank via a logic valve (27).

20112015091001

1/28/82

DEVICE FOR FINELY CUTTING WORKPIECES FROM A MATERIAL

The invention relates to an apparatus for the fine blanking of workpieces from a material, comprising a press plate, which is under the pressure of a V-ring cylinder and has a V-ring, and a blanking punch which is guided in the press plate and to which a die plate with counterholder (ejector) is assigned at a ram.

The working principle of fine blanking is shown and described in "Feinschneiden", Handbuch für die Praxis, publisher Feintool AG Lyss, 2nd edition, 1977, pages 15 to 17. A fine-blanking tool essentially comprises a press plate with V-ring, in which a blanking punch is guided. A counterholder or ejector in a die plate is assigned to the blanking punch in a position opposite the latter.

A workpiece, for example a metal sheet, is inserted between press plate and blanking punch or die plate and counterholder. The top part and the bottom part of the tool are closed and the workpiece is clamped in position inside and outside the cutting line by means of a V-ring force and a counterforce. The press plate and the die plate are guided relative to the blanking punch and counterholder and thus the workpiece is cut out of the material. After the workpiece has

10018609-021102

been cut out, the tool is opened and the workpiece is usually ejected from the die plate by means of the counterholder.

In these conventional fine-blanking presses, the force of the V-ring cylinder, which is usually arranged in the top crosshead of the machine column, opposes the blanking force. The counterholder cylinder, which is integrated in the ram or in the working piston, also presses the workpiece against the top part of the tool; the counterholder supporting force likewise opposes the blanking force. The counterforce of the V-ring cylinder may be up to 50% and that of the counterholder up to 25% of the working force. However, this considerably reduces the capacity of the entire apparatus.

To solve this problem, DE 196 42 635 A1 proposes that V-ring cylinder and counterholder cylinder be arranged in a different way, the V-ring cylinder being integrated in a separate crosspiece above the column and being connected to the ram via pillars, so that it moves upward in synchronism with the ram. The counterholder cylinder is in turn arranged between the ram and a bottom crosshead of the column, no relative movement taking place between counterholder cylinder and column during stroke, so that the supporting forces of the counterholder cylinder are absorbed by the machine column.

Apart from the fact that this apparatus is of very complicated construction and has to work with various

20110101 09:00:00

hydraulic operating circuits, it has been found that, for strength reasons, the crosspiece for the V-ring cylinder has to be of very solid construction. This in turn requires a configuration as a heavy and expensive machine, so that the energy saving due to the traveling V-ring cylinder is nullified by this large mass to be moved during each stroke. In addition, assembly is very difficult.

The object of the present invention is to provide an apparatus of the above-mentioned type in which the force of the V-ring cylinder is compensated for in a simple manner and the construction of which is substantially simplified.

This object is achieved by the ram being supported against at least one compensation cylinder which is hydraulically connected to the V-ring cylinder.

In this case, the compensation cylinder is designed in such a way that it is in hydraulic equilibrium with the V-ring cylinder. This means that the force of the V-ring cylinder is absorbed and compensated for by the compensation cylinder during each ram stroke, so that it has no effect on the actual ram stroke.

For reasons of force distribution, it would probably be appropriate to distribute the counterforce produced by the compensation cylinders over a plurality of compensation cylinders. In the present exemplary embodiment, four compensation cylinders are intended, although, depending on

2011-2015

the press and the embodiment, more or fewer compensation cylinders are possible.

The compensation cylinder is firmly connected to the ram via a piston rod on a piston. It is subjected to the same pressure as a piston in the V-ring cylinder, this pressure equilibrium being produced in the simplest way by an effective cross-sectional area of the compensation pistons corresponding to the effective cross-sectional area of the piston of the V-ring cylinder. As a result, no additional pressure supply elements are required for maintaining the same pressures on both pistons. It is sufficient if the two working spaces of V-ring cylinder and compensation cylinder are hydraulically connected to one another via a line. The equal cross-sectional areas of the pistons then exert an equal pressure on the press plate or the die plate or the ram.

For the sake of simplicity, the V-ring cylinder is arranged on a crosshead of the machine frame, so that an additional crosspiece is dispensed with. The moving mass is thus substantially smaller during a ram stroke, so that the expenditure of energy per stroke and the weight of the machine can be kept substantially smaller. No additional connecting frame (crosspiece) is necessary, so that the construction becomes substantially simpler and more favorable.

2011.02.20 15:05:00

The assembly possibilities are substantially improved and the machine height is reduced.

Should it prove to be necessary, in the case of a rapid motion of the machine, for the oil exchange between V-ring cylinder and compensation cylinder to be accelerated, an oil tank can be added to the connection via an appropriate logic valve, so that a large oil quantity, which is briefly necessary, can be drawn in from the oil tank via the logic valve.

Further advantages, features and details of the invention follow from the description below of a preferred exemplary embodiment and with reference to the drawing; the latter shows, in a single figure, a cross section through an apparatus according to the invention for the fine blanking of workpieces from a material, for example from a metal sheet 1. This metal sheet 1 passes through a machine frame 2 between a crosshead 3 and a base 4. Side walls are identified by 5 and 6.

A fine-blanking tool 8, as generally known, is provided between the crosshead 3 and a ram 7. Reference is made in this respect to the book "Feinschneiden" Handbuch für die Praxis, publisher: Feintool AG Lyss, 2nd edition, 1977, pages 15 to 17.

Such a fine-blanking tool 8 has a blanking punch 9 which is guided in a press plate 10. Toward the metal sheet 1, this

20110303 09:10:20

press plate 10 has a V-ring 11. The press plate 10 is supported in the opposite direction against a V-ring piston 12 in a V-ring cylinder 13. The V-ring cylinder 13 is located in a corresponding housing 14 on the crosshead 3, the V-ring piston 12 being connected through the crosshead 3 to the press plate 10 via a piston rod 15 and various pressure plates and rams (not identified in any more detail).

At the ram 7, a counterholder 16, which may also serve as ejector, is assigned to the blanking punch 9. The hydraulics for applying pressure to this counterholder 16 are not to be described here in any more detail. They are described in the above-mentioned manual.

The counterholder 16 is guided in a die plate 17, the blanking punch 9 pressing the workpiece to be cut out into this die plate 17, in the course of which the counterholder 16 gives way.

The stroke of the ram 7 in the direction of the double arrow 18 is effected via two main cylinders 19.1 and 19.2, in which a piston 20.1 and 20.2 is guided in each case. Each piston 20.1 and 20.2 is firmly connected to the ram 7 via a piston rod 21.1 and 21.2.

According to the invention, however, the ram 7 is also supported against preferably four compensation cylinders 22, only one being described below. Guided in the compensation cylinder 22 is a compensation piston 23, which in turn is

201120 60931001

firmly connected to the ram 7 via a piston rod 24. According to the invention, the compensation piston or pistons 23 have an effective cross-sectional area which corresponds to that of the V-ring piston 12. Furthermore, the V-ring cylinder 13 and the compensation cylinder 22 are coupled to one another via a hydraulic connection 25. An oil tank (not shown in any more detail) can be connected in this hydraulic connection 25 via a further connection 26 and a logic valve 27.

The two main cylinders 19.1 and 19.2 are also connected to one another and via a valve 28 to an oil tank (not shown in any more detail).

The mode of operation of the present invention is as follows:

When tool 8 is opened, a metal sheet 1, from which a workpiece is to be cut, is inserted between the blanking punch 9 and the die plate 17 or the press plate 10 and the counterholder 16.

The ram 7 is raised by means of the two main cylinders 19.1 and 19.2, the metal sheet 1 being clamped in place between the die plate 17 and press plate 10. In the process, the V-ring 11 is pressed into the metal sheet 1. The forces which emanate from the V-ring cylinder 13 in the process are neutralized by the compensation cylinders 22, since their pistons together have the same effective cross-sectional area as the piston 12 of the V-ring cylinder.

20180903 10:00

During a further ram stroke, the blanking punch 9 presses the workpiece to be cut out into the die plate 17, in the course of which the counterholder 16 gives way.

Once the workpiece has been cut out of the metal sheet, the machine opens, and the counterholder 16 can eject the workpiece from the die plate 17.

If the device is operated with a rapid motion, it is possible that an oil exchange will not take place quickly enough via the connection 25. In this case, a large oil quantity, which is briefly necessary, can be drawn in from the oil tank via the logic valve 28.

10018609-021102

Patent claims

1. An apparatus for the fine blanking of workpieces from a material (1), comprising a press plate (10), which is under the pressure of a V-ring cylinder (13) and has a V-ring (11), and a blanking punch (9) which is guided in the press plate (10) and to which a die plate (17) with counterholder (16) (ejector) is assigned at a ram (7), characterized in that the ram (7) is supported against at least one compensation cylinder (22) which is hydraulically connected to the V-ring cylinder (13).

2. The apparatus as claimed in claim 1, characterized in that four compensation cylinders (22) are provided.

3. The apparatus as claimed in claim 1 or 2, characterized in that a piston (23) is arranged in the compensation cylinder(s) (22) and is firmly connected to the ram (7) via a piston rod (24).

4. The apparatus as claimed in claim 3, characterized in that an effective cross-sectional area of the compensation piston(s) (23) is equal to an effective cross-sectional area of a piston (12) of the V-ring cylinder.

5. The apparatus as claimed in at least one of claims 1 to 4, characterized in that the V-ring cylinder (13) is arranged on a crosshead (3) of a machine frame (2).

20112015031001

6. The apparatus as claimed in at least one of claims 1 to 5, characterized in that the ram (7) is supported against at least one main cylinder (19.1, 19.2).

7. The apparatus as claimed in claim 6, characterized in that a piston (20.1, 20.2) of the main cylinder (19.1, 19.2) has an effective cross-sectional area which is greater than that of the compensation piston(s) (23).

8. The apparatus as claimed in at least one of claims 1 to 7, characterized in that the hydraulic connection (25) between compensation cylinder (22) and V-ring cylinder (13) also has a connection (26) to an oil tank via a logic valve (27).

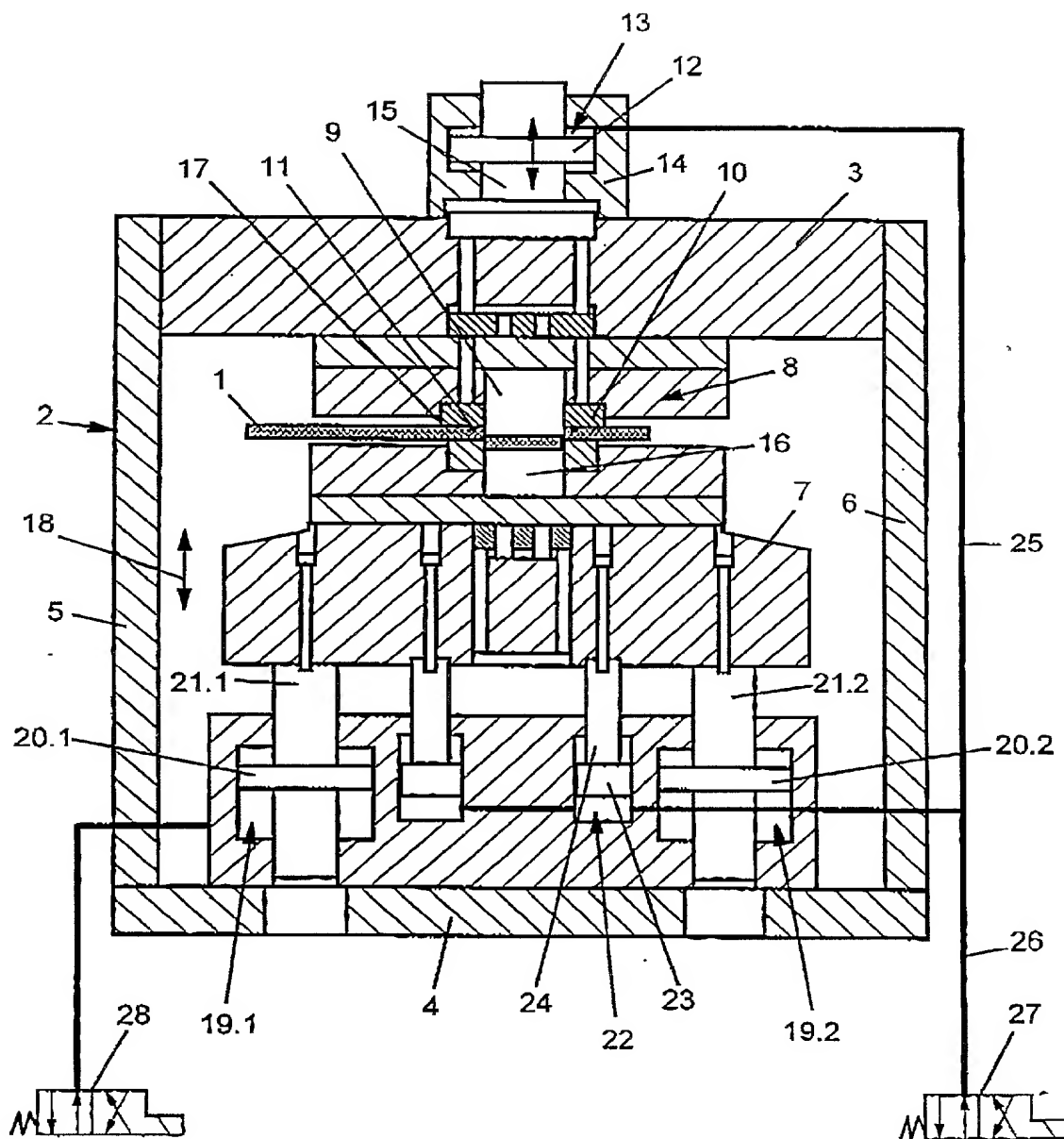
20110101 09:00:00

10/018609

PCT/EP00/05681

WO 01/00396

1/1



201120"60981001



92311/TCT-US

(Rel.82-12/99 Pub.605)

FORM 1-1

1-5

Practitioner's Docket No. 01-732

PATENT

COMBINED DECLARATION AND POWER OF ATTORNEY

(ORIGINAL, DESIGN, NATIONAL STAGE OF PCT, SUPPLEMENTAL, DIVISIONAL, CONTINUATION, OR C-I-P)

As a below named inventor, I hereby declare that:

TYPE OF DECLARATION

This declaration is of the following type:

(check one applicable item below)

- ☐ original.
☐ design.

NOTE: With the exception of a supplemental oath or declaration submitted in a reissue, a supplemental oath or declaration is not treated as an amendment under 37 CFR 1.312 (Amendments after allowance), M.P.E.P. § 714.16, 7th Edition.

- ☐ supplemental.

NOTE: If the declaration is for an International Application being filed as a divisional, continuation or continuation-in-part application, do not check next item; check appropriate one of last three items.

- ☒ national stage of PCT.

NOTE: If one of the following 3 items apply, then complete and also attach ADDED PAGES FOR DIVISIONAL, CONTINUATION OR C-I-P.

NOTE: See 37 C.F.R. § 1.63(d) (continued prosecution application) for use of a prior nonprovisional application declaration in the continuation or divisional application being filed on behalf of the same or fewer of the inventors named in the prior application.

- ☐ divisional.
☐ continuation.

NOTE: Where an application discloses and claims subject matter not disclosed in the prior application, or a continuation or divisional application names an inventor not named in the prior application, a continuation-in-part application must be filed under 37 C.F.R. § 1.53(b) (application filing requirements — nonprovisional application).

- ☐ continuation-in-part (C-I-P).

INVENTORSHIP IDENTIFICATION

WARNING: If the inventors are each not the inventors of all the claims, an explanation of the facts, including the ownership of all the claims at the time the last claimed invention was made, should be submitted.

My residence, post office address and citizenship are as stated below, next to my name. I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter that is claimed, and for which a patent is sought on the invention entitled:

TITLE OF INVENTION

DEVICE FOR FINELY CUTTING WORKPIECES FROM A MATERIAL

SPECIFICATION IDENTIFICATION

the specification of which:

(complete (a), (b), or (c))



(a) ☒ is attached hereto.

NOTE: "The following combinations of information supplied in an oath or declaration filed on the application filing date with a specification are acceptable as minimums for identifying a specification and compliance with any one of the items below will be accepted as complying with the identification requirement of 37 CFR 1.63:

"(1) name of inventor(s), and reference to an attached specification which is both attached to the oath or declaration at the time of execution and submitted with the oath or declaration on filing;

"(2) name of inventor(s), and attorney docket number which was on the specification as filed; or

"(3) name of inventor(s), and title which was on the specification as filed."

Notice of July 13, 1995 (1177 O.G. 60).

(b) ☒ was filed on December 17, 2001, as ☒ Serial No. 10 / 018,609
or ☐
and was amended on _____ (if applicable).

NOTE: Amendments filed after the original papers are deposited with the PTO that contain new matter are not accorded a filing date by being referred to in the declaration. Accordingly, the amendments involved are those filed with the application papers or, in the case of a supplemental declaration, are those amendments claiming matter not encompassed in the original statement of invention or claims. See 37 C.F.R. § 1.67.

NOTE: "The following combinations of information supplied in an oath or declaration filed after the filing date are acceptable as minimums for identifying a specification and compliance with any one of the items below will be accepted as complying with the identification requirement of 37 CFR 1.63:

"(A) application number (consisting of the series code and the serial number, e.g., 08/123,456);

"(B) serial number and filing date;

"(C) attorney docket number which was on the specification as filed;

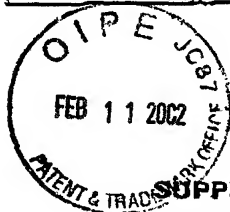
"(D) title which was on the specification as filed and reference to an attached specification which is both attached to the oath or declaration at the time of execution and submitted with the oath or declaration; or

"(E) title which was on the specification as filed and accompanied by a cover letter accurately identifying the application for which it was intended by either the application number (consisting of the series code and the serial number, e.g., 08/123,456), or serial number and filing date. Absent any statement(s) to the contrary, it will be presumed that the application filed in the PTO is the application which the inventor(s) executed by signing the oath or declaration."

M.P.E.P. § 601.01(a), 7th Ed.

(c) ☐ was described and claimed in PCT International Application No. _____, filed on _____ and as amended under PCT Article 19 on _____ (if any).

(Declaration and Power of Attorney [1-1]—page 2 of 7)

**SUPPLEMENTAL DECLARATION (37 C.F.R. § 1.67(b))**

(complete the following where a supplemental declaration is being submitted)

- ☐ I hereby declare that the subject matter of the
- ☐ attached amendment
 - ☐ amendment filed on _____

was part of my/our invention and was invented before the filing date of the original application, above-identified, for such invention.

ACKNOWLEDGEMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information, which is material to patentability as defined in 37, Code of Federal Regulations, § 1.56,

(also check the following items, if desired)

- ☒ and which is material to the examination of this application, namely, information where there is a substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent, and
- ☐ in compliance with this duty, there is attached an information disclosure statement, in accordance with 37 C.F.R. § 1.98.

PRIORITY CLAIM (35 U.S.C. §§ 119(a)-(d))

NOTE: "The claim to priority need be in no special form and may be made by the attorney or agent if the foreign application is referred to in the oath or declaration as required by § 1.63. The claim for priority and the certified copy of the foreign application specified in 35 U.S.C. 119(b) must be filed in the case of an interference (§ 1.630), when necessary to overcome the date of a reference relied upon by the examiner, when specifically required by the examiner, and in all other situations, before the patent is granted. If the claim for priority or the certified copy of the foreign application is filed after the date the issue fee is paid, it must be accompanied by a petition requesting entry and by the fee set forth in § 1.17(f). If the certified copy is not in the English language, a translation need not be filed except in the case of interference; or when necessary to overcome the date of a reference relied upon by the examiner; or when specifically required by the examiner, in which event an English language translation must be filed together with a statement that the translation of the certified copy is accurate." 37 C.F.R. § 1.55(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §§ 119(a)-(d) of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed.

(complete (d) or (e))

- (d) ☐ no such applications have been filed.
- (e) ☒ such applications have been filed as follows.

NOTE: Where item (c) is entered above and the international application which designated the U.S. itself claimed priority check item (e), enter the details below and make the priority claim.

**PRIOR FOREIGN/PCT APPLICATION(S) FILED WITHIN 12 MONTHS
(6 MONTHS FOR DESIGN) PRIOR TO THIS APPLICATION
AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. § 119(a)-(d)**



COUNTRY (OR INDICATE IF PCT)	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 37 USC 119
GERMANY	199 29 163.2	25, June 1999	<input checked="" type="checkbox"/> YES NO <input type="checkbox"/>
			<input type="checkbox"/> YES NO <input type="checkbox"/>
			<input type="checkbox"/> YES NO <input type="checkbox"/>
			<input type="checkbox"/> YES NO <input type="checkbox"/>
			<input type="checkbox"/> YES NO <input type="checkbox"/>

**CLAIM FOR BENEFIT OF PRIOR U.S. PROVISIONAL APPLICATION(S)
(34 U.S.C. § 119(e))**

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

PROVISIONAL APPLICATION NUMBER

FILING DATE

_____/_____
_____/_____
_____/_____

**CLAIM FOR BENEFIT OF EARLIER US/PCT APPLICATION(S)
UNDER 35 U.S.C. § 120**

- ☐ The claim for the benefit of any such applications are set forth in the attached ADDED PAGES TO COMBINED DECLARATION AND POWER OF ATTORNEY FOR DIVISIONAL, CONTINUATION OR CONTINUATION-IN-PART (C-I-P) APPLICATION.

(Declaration and Power of Attorney [1-1]—page 4 of 7)

FEB 11 2002

**ALL FOREIGN APPLICATION(S), IF ANY, FILED MORE THAN 12 MONTHS
(6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION**

NOTE: If the application filed more than 12 months from the filing date of this application is a PCT filing forming the basis for this application entering the United States as (1) the national stage, or (2) a continuation, divisional, or continuation-in-part, then also complete **ADDED PAGES TO COMBINED DECLARATION AND POWER OF ATTORNEY FOR DIVISIONAL, CONTINUATION OR C-I-P APPLICATION** for benefit of the prior U.S. or PCT application(s) under 35 U.S.C. § 120.

POWER OF ATTORNEY

I hereby appoint the following practitioner(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

(list name and registration number)

Robert H. Bachman, (19,374); Gregory P. LaPointe, (28,395);
Barry L. Kelmachter (29,999); and George A. Coury, (34,309)

(check the following item, if applicable)

- ☐ I hereby appoint the practitioner(s) associated with the Customer Number provided below to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.
- ☐ Attached, as part of this declaration and power of attorney, is the authorization of the above-named practitioner(s) to accept and follow instructions from my representative(s).

NOTE: "Special care should be taken in continuation or divisional applications to ensure that any change of correspondence address in a prior application is reflected in the continuation or divisional application. For example, where a copy of the oath or declaration from the prior application is submitted for a continuation or divisional application filed under 37 CFR 1.53(b) and the copy of the oath or declaration from the prior application designates an old correspondence address, the Office may not recognize, in the continuation or divisional application, the change of correspondence address made during the prosecution of the prior application. Applicant is required to identify the change of correspondence address in the continuation or divisional application to ensure that communications from the Office are mailed to the current correspondence address. 37 CFR 1.63(d)(4), "§ 601.03, M.P.E.P., 7th Edition.

SEND CORRESPONDENCE TO

☒ Address
BACHMAN & LAPOINTE, P.C.
900 Chapel Street, Suite 1201
New Haven, CT 06510-2802

DIRECT TELEPHONE CALLS TO:
(Name and telephone number)

George A. Coury
(203) 777-6628

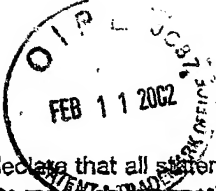
☐ Customer Number _____

(complete the following if applicable)

Since this filing is a ☐ continuation ☐ divisional there is attached hereto a Change of Correspondence Address so that there will be no question as to where the PTO should direct all correspondence.

(Declaration and Power of Attorney [1-1]—page 5 of 7)

10013609 021102



DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

SIGNATURE(S)

NOTE: Carefully indicate the family (or last) name, as it should appear on the filing receipt and all other documents.

NOTE: Each inventor must be identified by full name, including the family name, and at least one given name without abbreviation together with any other given name or initial, and by his/her residence, post office address and country of citizenship. 37 CFR § 1.63(a)(3).

NOTE: Inventors may execute separate declarations/oaths provided each declaration/oath sets forth all the inventors. Section 1.63(a)(3) requires that a declaration/oath, inter alia, identify each inventor and prohibits the execution of separate declarations/oaths which each sets forth only the name of the executing inventor. 62 Fed. Reg. 53,131, 53,142, October 10, 1997.

Full name of sole or first inventor

Ernst Rytz
(GIVEN NAME) (MIDDLE INITIAL OR NAME) FAMILY (OR LAST NAME)
Inventor's signature X
Date 4.12.2001 Country of Citizenship SWITZERLAND
Residence Subergfeld 12, CH-3262 Suberg, SWITZERLAND
Post Office Address same as above CHX

Full name of second joint inventor, if any

Hans-Rudolf Gubler
(GIVEN NAME) (MIDDLE INITIAL OR NAME) FAMILY (OR LAST NAME)
Inventor's signature X
Date 4.12.01 Country of Citizenship SWITZERLAND
Residence Riedwiesstrasse 18, CH-5412 Gebenstorf, SWITZERLAND
Post Office Address same as above CHX

Full name of third joint inventor, if any

(GIVEN NAME) (MIDDLE INITIAL OR NAME) FAMILY (OR LAST NAME)
Inventor's signature _____
Date _____ Country of Citizenship _____
Residence _____
Post Office Address _____

(Declaration and Power of Attorney [1-1]—page 6 of 7)



(check proper box(es) for any of the following added page(s)
that form a part of this declaration)

- ☐ Signature for fourth and subsequent joint inventors. Number of pages added _____
- * * *
- ☐ Signature by administrator(trix), executor(trix) or legal representative for deceased or incapacitated inventor. Number of pages added _____
- * * *
- ☐ Signature for inventor who refuses to sign or cannot be reached by person authorized under 37 CFR 1.47. Number of pages added _____
- * * *
- ☐ Added page for signature by one joint inventor on behalf of deceased inventor(s) where legal representative cannot be appointed in time. (37 CFR 1.47)
- * * *
- ☐ Added pages to combined declaration and power of attorney for divisional, continuation, or continuation-in-part (C-I-P) application.
- ☐ Number of pages added _____
- * * *
- ☐ Authorization of practitioner(s) to accept and follow instructions from representative.
- * * *

(If no further pages form a part of this Declaration,
then end this Declaration with this page and check the following item)

☒ This declaration ends with this page.

20110209 09:44:00